Release notes for ENDF/B Development e-082_Pb_000 evaluation

October 13, 2016

- `fudge-4.0` Warnings:

  1. Mislabled emitted particle
     Reading ENDF file: ../e-082_Pb_000.endf (Error # 0): ZAP messed up

     `WARNING: photon most likely labelled as an electron (ZAP = 11), converting to ZAP = 0`

  2. FIXME: Generic fudge unimplemented message
     reaction label 1: e- + Pb + gamma [bremsstrahlung] / Product: e- (Error # 0): Generic unimp (c)

     `WARNING: Checking not yet implemented for energyLoss type data`

  3. FIXME: Generic fudge unimplemented message
     reaction label 2: e- + Pb [excitation] / Product: e- (Error # 0): Generic unimp (c)

     `WARNING: Checking not yet implemented for energyLoss type data`

- `fudge-4.0` Errors:

  1. Calculated and tabulated thresholds don't agree
     reaction label 0: e- + Pb [large angle Coulomb scattering] / Cross section: (Error # 0): Threshold mismatch

     `WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 10. eV!`

  2. Calculated and tabulated thresholds don't agree
     reaction label 1: e- + Pb + gamma [bremsstrahlung] / Cross section: (Error # 0): Threshold mismatch

     `WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 10. eV!`

  3. Calculated and tabulated thresholds don't agree
     reaction label 2: e- + Pb [excitation] / Cross section: (Error # 0): Threshold mismatch

     `WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 10. eV!`

  4. Calculated and tabulated thresholds don't agree
     reaction label 3: e- + e- + Pb1s1/2 / Cross section: (Error # 0): Threshold mismatch

     `WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 88290. eV!`

  5. Calculated and tabulated thresholds don't agree
     reaction label 4: e- + e- + Pb2s1/2 / Cross section: (Error # 0): Threshold mismatch

     `WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 15847. eV!`

  6. Calculated and tabulated thresholds don't agree
     reaction label 5: e- + e- + Pb2p1/2 / Cross section: (Error # 0): Threshold mismatch

     `WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 15251. eV!`

  7. Calculated and tabulated thresholds don't agree
     reaction label 6: e- + e- + Pb2p3/2 / Cross section: (Error # 0): Threshold mismatch

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```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 13040. eV!
```

8. Calculated and tabulated thresholds don't agree
   reaction label 7: e- + e- + Pb3s1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 3824.3 eV!
```

9. Calculated and tabulated thresholds don't agree
   reaction label 8: e- + e- + Pb3p1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 3549.3 eV!
```

10. Calculated and tabulated thresholds don't agree
    reaction label 9: e- + e- + Pb3p3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 3054.6 eV!
```

11. Calculated and tabulated thresholds don't agree
    reaction label 10: e- + e- + Pb3d3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 2594.7 eV!
```

12. Calculated and tabulated thresholds don't agree
    reaction label 11: e- + e- + Pb3d5/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 2489. eV!
```

13. Calculated and tabulated thresholds don't agree
    reaction label 12: e- + e- + Pb4s1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 876.72 eV!
```

14. Calculated and tabulated thresholds don't agree
    reaction label 13: e- + e- + Pb4p1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 756.02 eV!
```

15. Calculated and tabulated thresholds don't agree
    reaction label 14: e- + e- + Pb4p3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 634.3 eV!
```

16. Calculated and tabulated thresholds don't agree
    reaction label 15: e- + e- + Pb4d3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 435.23 eV!
```

17. Calculated and tabulated thresholds don't agree
    reaction label 16: e- + e- + Pb4d5/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 412.49 eV!
```

18. Calculated and tabulated thresholds don't agree
    reaction label 17: e- + e- + Pb4f5/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 153.04 eV!
```

19. Calculated and tabulated thresholds don't agree
reaction label 18: e- + e- + Pb4f7/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 147.81 eV!
```

20. Calculated and tabulated thresholds don't agree
reaction label 19: e- + e- + Pb5s1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 152.83 eV!
```

21. Calculated and tabulated thresholds don't agree
reaction label 20: e- + e- + Pb5p1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 110.91 eV!
```

22. Calculated and tabulated thresholds don't agree
reaction label 21: e- + e- + Pb5p3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 87.64 eV!
```

23. Calculated and tabulated thresholds don't agree
reaction label 22: e- + e- + Pb5d3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 28.81 eV!
```

24. Calculated and tabulated thresholds don't agree
reaction label 23: e- + e- + Pb5d5/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 26.03 eV!
```

25. Calculated and tabulated thresholds don't agree
reaction label 24: e- + e- + Pb6s1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 15.05 eV!
```

26. Calculated and tabulated thresholds don't agree
reaction label 25: e- + e- + Pb6p1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 7. eV!
```

27. Calculated and tabulated thresholds don't agree
reaction label 26: e- + e- + Pb6p3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 5.29 eV!
```

- `xsectplotter` Warnings:

  1. Mislabled emitted particle
     Error: ZAP messed up

     ```
     stderr while processing crossSection

         WARNING: photon most likely labelled as an electron (ZAP = 11), converting to ZAP = 0
     ... [4 more lines]
     ```